

In the Claims:

1. (Currently Amended) A method of enabling remote surveillance of any entry port to any switching node of an ATM cell-relay network, said ATM cell-relay network comprising one or more of said switching nodes that each include a plurality of ports, said method comprising the steps of:

setting up a path, through said ATM network, between said entry port and a remote observation point;

duplicating all cells of incoming traffic entering through said entry port;

marking all of said duplicated cells, wherein said marking is connection independent; and

transporting, along said path, said marked and duplicated cells up to said observation point.

2. (Original) The method of claim 1, wherein said step of marking all duplicated cells further includes the steps of:

reserving one bit within a cells channel identifier field to unambiguously distinguish said duplicated cells; and

asserting said reserved bit of every of said duplicated cells.

3. (Original) The method of claim 2, wherein said step of reserving one bit further comprises the step of alternatively utilizing one bit of a cells Generic Flow Control field.

4. (Original) The method of claim 2, wherein said step of reserving one bit further comprises the step of reserving a most significant bit of a Virtual Channel identifier field part of said cells channel identifier field.

5. (Original) The method of claim 1, wherein said marking step further comprises the step of marking said duplicated cells with any unique combination of bits within a header of said duplicated cells.

6. (Original) The method of claim 1, wherein said step of duplicating cells is performed within said switching node of said entry port.

7. (Original) The method of claim 1, wherein said step of duplicating cells further comprises the step of duplicating unexpected cells, errored cells, and nonconforming cells.

8. (Original) The method of claim 1, wherein within all intermediate said switching nodes along said path up to said observation point, said step of transporting said marked and duplicated cells further comprises the steps of:

recognizing said marked and duplicated cells upon entry of each of said marked and duplicated cells into a port of each intermediate switching node;

testing to determine whether said port of each intermediate switching node is included within said path to said remote observation point;

in response to determining that said port is included within said path to said remote observation point:

maintaining said marked and duplicated cells unaltered; and

moving said marked and duplicated cell forward;

in response to determining that said port is not included within said path to said remote observation point:

discarding said marked and duplicated cells; and

recording an error.

9. (Currently Amended) A system for enabling remote surveillance of any entry port to any switching node of an ATM cell-relay network, said ATM cell-relay network comprising one or more of said switching nodes that each include a plurality of ports, said system comprising:

means for setting up a path, through said ATM network, between said entry port and a remote observation point;

means for duplicating all cells of incoming traffic entering through said entry port;

means for marking all of said duplicated cells, wherein said marking is connection independent; and

means for transporting, along said path, said marked and duplicated cells up to said observation point.

10. (Original) The system of claim 9, further comprising:

in each of said switching node:

a cell switch fabric; and

adaptive blades between said ports and said cell switch fabric.

11. (Original) The system of claim 10, further comprising means within said cell switch fabric or within said adaptive blades for replicating cells.